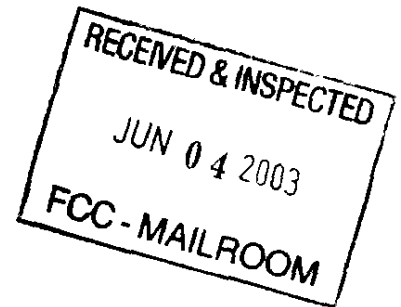


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29 April 2003

Office of Engineering & Technology  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

DO NOT FILE COPY ORIGINAL



REF: ET Docket No. 03-104

SUBJECT: Notice of Inquiry, Broadband Over Power Line (BPL)

To Whom It May Concern:

I wish to submit the below Public Comments in response to the Commission's Notice of Inquiry, Broadband Over Power Line, ET Docket No. 03-104.

As an Electrical Engineering Professional, a member of the National Association of Radio and Telecommunications Engineers (NARTE)<sup>1</sup>, and an Extra Class licensee in the Amateur Radio Service, I have serious concerns about the potential incompatibility of proposed Broadband Over Power Line (BPL) systems versus existing radio-frequency spectrum authorized users.

As outlined in the FCC news release dated 4/23/03, the proposed new BPL systems would produce modulated digital signals in the frequency range of 2 - 80MHz, transmitted over existing medium voltage power lines, with the objective of bringing Internet and other broadband applications to homes and businesses. There are several major potential technical problems with this approach that must be considered:

1. *Power line physical and technical limitations.* Power lines are of such physical dimension and design that they efficiently carry energy at the standard AC line frequency of 60Hz. At RF frequencies (the BPL-proposed 2MHz to 80MHz), power lines become very inefficient at containing the RF electromagnetic field energy, and instead act more efficiently as signal radiators than as transmission lines.
2. *Wideband nature of digital signals.* The BPL signal will be some type of modulated digital RF. This type of signal typically has an extremely wide bandwidth, directly proportional to the data rate (the higher rates, and therefore wider bandwidths, being more desirable from a strictly-BPL viewpoint). This means that the signal may occupy a very large portion (perhaps all) of the proposed 2MHz to 80MHz bandwidth.
3. *Effects on existing authorized spectrum users.* Considering Items 1 and 2 above, together with the ubiquity of power lines across the country, the radiated BPL signal could

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<sup>1</sup>My membership in NARTE is stated to demonstrate my professional qualifications only. The information and opinions set forth in this document are my own and in no way reflect or represent any position or view of NARTE.

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